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ABSTRACT

Sexual choices and sexual behavior involve complex cognitive as well as affective processes. Models which denote cognitive processes influencing sexual behavior are needed. Attribution theory is a prominent social-cognition model that may influence these phenomena. This study was conducted to determine whether or not different virginity status groups make different causal attributions about virginity and sexual choices, whether or not self-monitoring influences this attribution process, and whether or not men and women differ in this regard. Undergraduate students (N=198) completed both Russell's Causal Dimension Scale and Snyder's Self-Monitoring Scale. The results indicated a variety of statistically significant virginity status and gender differences on the dependent variable of causal attributions. The covariate of self-monitoring was not statistically significant. (Author)

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Causal Attributions, Self-Monitoring,
and Gender Differences
Among Four Virginity Status Groups

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Abstract

Sexual choices and sexual behavior involve complex cognitive, as well as affective processes. Models which denote cognitive processes influencing sexual behavior are needed. Attribution theory is a prominent social-cognition model that may influence these phenomena. One-hundred and ninety-eight (198) undergraduate college men and women separated by self-reported virginity status, completed both Russell's Causal Dimension Scale (CDS) and Snyder's Self-Monitoring Scale. Our purpose was to determine whether or not different virginity status groups make different causal attributions about virginity and sexual choices, whether or not self-monitoring influences this attribution process, and whether or not men and women differ in this regard. Results indicated a variety of statistically significant virginity status and gender differences on the dependent variable, causal attributions. The co-variate of self-monitoring was not statistically significant. Possible explanations and potential implications of these results are presented.

Causal Attributions, Self-Monitoring,
and Gender Differences
Among Four Virginity Status Groups

The relationship between attitudes and sexual behavior is a perpetual, unresolved problem. It is probable that they interact in complex ways, each affecting the other. Behavioral and attitudinal trends in adolescent and early adult (college-age) sexual behavior have been accounted for by the increasing urbanization and industrialization in the United States, rising employment for women, an increase in women's rights, and greater contact with other cultures (Reiss, 1980; 1982).

There is considerable evidence that by the mid-1960's high school and college-age individuals had become more accepting of premarital sexual expression primarily within an affectionate, if not committed, relationship (DeLameter & MacCorquodale, 1979). There is also considerable evidence suggesting that females are likely to behave in accordance with their own personal sexual standards while males tend to still behave opportunistically (Berger & Wegner, 1973; Diamond, 1970; Eastman, 1972; Reiss, 1980). By 1976 there was a growing tendency for adolescents and young adults to report that sexual behavior is more a matter of personal choice than a matter of social mores, a distinct shift from prior decades (Yankelovich, 1974; 1980; 1981).

Until recently, most adolescents, especially young women, moved gradually toward advanced levels of sexual intimacies, such as heavy petting and intercourse, through a series of dating and going-steady experiences (Reiss, 1980). However, research examining historical data now suggests that petting to orgasm has occurred for over half of both adolescent males and females for at least the last half century. Males have been more likely than females to engage in heavy petting and at younger ages, and they have also been more likely to move rapidly from petting to intercourse (Abernathy, Robinson, & Balswick, 1979).

Sexual choices and sexual behavior involve complex cognitive and affective processes, which at present remain largely unknown. Two social cognition variables that may enhance our understanding of these phenomena are attributions and self-monitoring. The purpose of this study was to determine whether or not different virginity status groups make different causal attributions about virginity and sexual choices, whether or not self-monitoring influences this attribution process, and whether or not men and women differ in this regard.

Virginity Status as an Independent Variable

The use of a subject's virginity status as a primary independent research variable for the

study of gender differences is rare. Jessor and Jessor (1975) and Jessor, Costa, and Jessor (1983) found that non-virgin adolescents scored higher on measures of independence, deviance, and positive attitudes towards sex, in contrast to their virgin counterparts. Compared to virgins, non-virgins also had lower grade point averages, less acceptance of parental control, were less religious, and had lower expectations of educational achievement. A decade later, Sherwin and Corbett (1985) were able to confirm many of these results.

Aside from these studies, there is little empirical literature describing virginity groups or the transition from virginity to non-virginity. It has been suggested that instead of using variables such as religiosity, attitudes about contraceptive use, educational experience, or family membership status to predict sexual behavior, the actual virginity status of the individual may be used (Schechterman, 1984; Schechterman, McCabe, and Fulmer, 1982). It has also been suggested that such a virginity variable may be used to predict differences between virgins and non-virgins in terms of expectations and post-intercourse mood (Schechterman, 1984).

Herold and Goodwin (1981) studied virginity subgroups as possible independent variables regarding virginity transition. They were able to define three self-selected subgroups: the adamant virgin (AV), the potential non-virgin (PNV), and the non-virgin (NV). They felt that most researchers had focused on virgins and non-virgins as distinct entities and had failed to study relevant subgroups. Studying data obtained from over five-hundred unmarried high school and college females, they were able to statistically differentiate between the three virginity status groups. Significant relationships were identified between virginity status and age, religiosity, career aspirations, parental and peer acceptance of pre-marital intercourse, dating commitment, and dating frequency. Peer experience with intercourse was the best predictor of the virginity status of the research participant. These researchers suggested that the potential non-virgin subgroup held distinctive features and could represent a bridge or transition from virginity to non-virginity.

Schechterman (1984) explored differences in expectations of sexual intercourse among four virginity groups. He believed that the transition from virginity to non-virginity was based on many things, including sexual expectations. In addition to the three previous virginity groups being empirically validated, a fourth group, the regretful non-virgin (RNV) was empirically validated and defined as an individual who has experienced sexual intercourse but did not plan to continue engaging in pre-marital sexual intercourse at the present time.

A variety of other variables provided significant virginity status differences (Schechterman

et al., 1982). These variables included Sex Guilt (Mosher 1973, 1980), Sexual Instrumentalism (Tavris, 1973), and Sexual Consideration (Schechterman & McCabe, 1982). Schechterman (1984) also established that RNV males and females were more likely to maintain lower expectations of intercourse than did the other three virginity groups.

Herold and Goodwin (1981) and Schechterman (1984) present evidence of the existence of four virginity status groups rather than the traditional two. Such researchers suggest the use of virginity status groups as independent variables rather than post hoc descriptive variables.

Attribution Theory

As individuals search for order and meaning in their environment, they attempt to explain the causes of the events they observe. This inherent cognitive drive to know and to understand the world is the focus of attribution theorists (Kelley, 1967; 1972). "Attribution theory is a theory about how people make causal explanations, about how they answer questions beginning with 'why?'" (Kelley, 1973, p. 108). Attribution theorists are most concerned with understanding naive perceptions of the "causes" of an event. Such theorists believe that by understanding common-sense ideas about why people do the things they do, one can better predict the behavior and reactions of individuals (Wong & Weiner, 1981). The present research explores causal attributions, and in terms of attribution theory, asks "if" and "how" the virginity status of the observer is related to attributions about others who possess the same or a different sexual status.

To better understand attributions an observer makes about other persons who possess a particular status in society (i.e., virginity status), it would seem critical to know the (virginity) status of the observer as well as the kinds of attributions the observer makes about others who possess that specific (virginity) status. An observer-target interaction remains compelling.

Although not all the following variables were directly measured, the present research concerned attributions made about situations and dispositions of observed individuals (e.g., Jones & Davis, 1965), self-attributions and misattributions (i.e., Jones & Nisbett, 1972), attributions of success and failure (i.e., Weiner, 1974), and to some extent, attributions of responsibility (i.e., Shaver, 1975). Russell's (1982) Causal Dimension Scale (CDS) was used to assess causal perceptions in terms of locus of causality (internal versus external), stability (stable or unstable), and controllability (controllable or uncontrollable) dimensions. The CDS assesses how individuals perceive causal attributions rather than which causal attributions are used to explain stimulus events. Russell's research is based upon the work of Weiner (1974, 1979, 1980, 1983, 1985).

When an attribution is made, what is the effect and how does it fit into sexual decision-making and virginity status? It appears that the attribution process has cognitive output which results in an observer forming a belief which, perhaps, may result in a decision to act (making a virginity status change) or not to act (maintaining present virginity status). Research by Russell and McAuley (1986; 1987) and Weiner (1985) supports this possibility.

Self-monitoring

Snyder (1974) and Snyder and Monson (1975) developed the self-monitoring construct to differentiate between persons whose behavior displays pronounced responsiveness to social and interpersonal cues of situational appropriateness (high self-monitors) and those people whose actions characteristically reflect their own underlying attitudes and dispositions (low self-monitors). Differences between persons high in self-monitoring and those low in self-monitoring include attributional processes (Snyder, 1980; Thayer & Shiff, 1977), social perception (Furnham, 1981), dating histories (Snyder & Simpson, 1984a; 1984b), and sexual relationships (Snyder, Simpson, & Gangestad, 1986).

Perhaps most critical to the present research is Furnham's (1981) study which examined self-monitoring and attributional differences regarding self and others. Furnham found important moderator effects of the attribution process. Those effects were not stable personality characteristics but related to and varied with situational variables. Subjects in that study displayed different attributions for self than for others. Furnham believes that there are salient individual differences such as self-monitoring which moderate cross-situational consistency of behavior. Participants thus were inclined to either seek out or to avoid persons with self-monitoring styles which differed from theirs with these choices reflecting their own social needs.

Sexual History and Attributional Processes

Previous research (Frank & Maass, 1985; Snyder, 1987; Snyder, Gangestad, & Simpson, 1983; Snyder & Simpson, 1984a; Thayer and Shiff, 1977) suggests that there are attributional sex differences in intimate relationships: (1) Females seem much more attentive to interpersonal interactions and to sexual involvement-history variables (e.g., virginity status); (2) a target's sexual history, when revealed to an audience or an observer (i.e., research participant) may play a very important (attributionally) causal role in observers' predictions about that target's sexual decisions and satisfaction in relationships.

Method

Participants

One-hundred and ninety-eight (198) undergraduate college students (40.9% male, 59.1% female) participated in this study. These students represented a social group in society likely (and able) to be dealing with sexual decision-making and choice. Participants ranged in age from 18 to 38 years with both a mean and median age of 20. Ninety percent (90%) were 22 years of age or younger, and 95% were 23 years of age or younger.

Over twenty-five percent (25.8%) were freshmen, 27.8% sophomores, 20.7% juniors, and 25.8% seniors. Although there were more female than male participants, the class year status for the subjects was fairly evenly distributed. This cross-sectional representation is important since virginity status and sexual decision-making processes may change over the college experience.

Eighty-two percent (82%) of the participants were single and never married; one percent (1.0%) stated that they were currently cohabitating; ten percent (10.0%) were engaged to be married; six percent (6.0%) were currently married; and one percent (1.0%) stated that they were currently divorced and single.

In terms of religious affiliation, 37.9% were Protestant; 34.3% were Catholic; 20.2% stated their religious affiliation to be "other;" and 7.6% stated that they had no specific religious affiliation. No participants were affiliated with the Jewish religion.

The majority of the participants were Caucasian (80.8%). A minority were Black (13.1%), Native American (3.0%), Hispanic (2.0%), or Oriental (1.0%). Overall, the population appeared to be a typical cross-section of a Midwestern college-age population that was predominantly Caucasian, unmarried, and either Protestant or Catholic.

Table 1 presents the distribution of subjects by sex across virginity status groups. A majority of the subjects (63.1%) stated that they were non-virgins; 8.1% stated that they were adamant virgins; 8.6% stated that they were potential non-virgins; and 20.2% stated that they were regretful non-virgins. A chi-square analysis confirmed that the four virginity status groups were significantly different in terms of number ($\chi^2 = 160.990$, $df = 3$, $p < .001$).

Table 1 about here

Of the 81 males who participated, four stated that they were adamant virgins; four stated that they were potential non-virgins; 57 stated that they were non-virgins; and 16 stated that they

were regretful non-virgins. Of the 117 females who participated, 12 stated that they were adamant virgins; 13 stated that they were potential non-virgins; 68 stated that they were non-virgins; and 24 stated that they were regretful non-virgins. A Chi-square analysis indicated that there were no significant differences in participants' virginity status across sex for either males or females ($\chi^2 = 4.95$, $df = 3$, $p < .07$). Overall, 33.3% of the participants were "non-virgins," and 16.7% were "virgins."

Instruments

Causal Dimension Scale (CDS). The CDS (Russell, 1982) is a Likert-type measure, designed to assess how the respondent perceives the cause that he/she has stated for an event. The scale assesses causal perceptions in terms of the locus of causality (internal-external), stability (stable-unstable), and controllability (controllable-uncontrollable) dimensions described by Weiner (1979). Participants responded to nine Likert-response items about a particular causal explanation for a given event, which was provided by the researcher. In this case, the event was the sexual behavior and decision of the target (vignette) person. Participants generated a causal statement and answered the items about that statement.

Russell (1982) and Russell and McAuley (1986, 1987) claim that the scale possesses both content validity and construct validity, that it is a reliable measure of causal attributions, and that the items clearly distinguish between internal and external causes, stable and unstable causes, and controllable and uncontrollable causes. The factor structure of the three scales yielded alpha reliability coefficients of .867, .837, and .730. Thus, according to Russell and McAuley (1987), all three scales are internally consistent. The three subscales are generally orthogonal with correlations ranging from .19 to .28. Reliability also has been established via several test-retest methods; coefficients range from .37 to .80 (Russell & McAuley, 1987). These authors believe that the three subscales measure the dimensional properties of cause identified by Weiner (1979).

Self-Monitoring Scale (SMS). The SMS (Snyder, 1974) has a history as a measure of the self-monitoring construct (self-observation and self-control guided by situational cues to social appropriateness). The original scale consists of 25 items which require the respondent to answer T (true) or F (false). Item responses are summed to yield a single self-monitoring score. The higher the score, the higher the degree of self-monitoring.

According to Snyder (1979), high versus low scores (i.e., descriptive categories) are typically decided by a median-split for the total sample. A Kuder-Richardson 20 reliability index of .70 and a test-retest reliability of .83 ($df = 51$, $p < .001$, one-month interval) characterized the

25 item scale. Cross-validation on an independent sample yielded a KR-20 reliability coefficient of .63. Correlations between the SMS scale and related, but conceptually distinct, individual difference measures (i.e., Brown-Marlowe Social Desirability Scale, $r = -.187$ to $-.388$; Pd scale of the MMPI, $r = -.20$) have provided evidence of the SMS scale's discriminant validity (Snyder, 1974).

Definition of Terms

Adamant Virgin (AV). An individual who has not experienced sexual intercourse and is not likely to engage in pre-marital intercourse.

Potential Non-Virgin (PNV). An individual who has not yet experienced sexual intercourse but would likely engage in it given the right person and the right situation.

Non-Virgin (NV). An individual who has experienced sexual intercourse and plans to continue engaging in sexual intercourse.

Regretful Non-Virgin (RNV). An individual who has experienced sexual intercourse but does not plan to continue engaging in pre-marital sexual intercourse at the present time.

Procedure

One consistent procedure was used to collect data from the volunteer participant sample. Data collection was accomplished in 12 group sessions over a three week period. Participants were recruited through the Department of Counseling Psychology's undergraduate research pool and were given two research credit hours for participating in the study. At the time of the administration of the questionnaire, participants were greeted and the research procedure was explained to them. They were advised of their rights to decline participation at any time without penalty.

Questionnaire packets, which contained eight different vignettes, were then randomly distributed to participants. Participants also received a consent form, a research credit form, a researcher feedback form, and an answer sheet. The eight possible vignettes to be read by participants were equally distributed throughout the sample.

Participants were then instructed to anonymously (1) complete the demographic information, (2) read vignette of "John" (male) or "Jane" (female), (3) respond to CDS and SMS scales, (4) respond to manipulation check on John's or Jane's virginity status, and (5) respond to one of four descriptors stating their own virginity status. Consent forms and research credit forms included the participants' names and were completed separately.

Following is an example of a vignette (female adamant virgin) used in the study: "Jane is a 20 year old college female of average height, weight, and appearance. She grew up in the Midwest and

her family still resides in the Midwest. Jane is a Liberal Arts major at a university which enrolls 18,000 students. Although Jane dates, she has never had sexual intercourse and plans not to engage in sex until after she is married. Jane hopes to get married and have a family some day."

Participants deposited their questionnaires and answer sheets in appropriately labeled boxes. Consent forms, research credit forms, and researcher feedback forms were deposited into other appropriate boxes. Thus, anonymous and non-anonymous information was kept separate. All participants were then debriefed and any questions answered individually. Participants also were offered a written explanation of the research study. All measurement and collection of data was conducted in a strictly confidential manner.

Description of Design and Analyses

The research design for this study comprised a four-way factorial experimental design with the following independent variables and levels: Participants virginiv status (VS, 4 levels), target vignette virginiv status (VSVIGN, 4 levels), sex of participants (SEX, 2 levels), and sex of target vignette (SEXVIGN, 2 levels), with one covariate (self-monitoring) applied to the three subscales of the CDS. Variables which were experimentally manipulated included the sex and virginiv status of the target person in the vignette read. Variables which were not manipulated included participants' sex and virginiv status. Dependent variables were the CDS locus, stability, and controllability scores made in response to the vignettes.

Alpha was set at .05 as a criterion for all analyses. After all data had been collected, a comprehensive descriptive analysis was conducted in order to describe the population and assess the appropriateness of the planned statistical analyses. It was then determined whether or not self-monitoring scores were correlated with self-selected virginiv status group membership. Previous to the collection of data, it was proposed that a MANCOVA would be used if self-monitoring scores were correlated with virginiv status. If self-monitoring scores were not correlated with virginiv status, a MANOVA would be used. All significant post-hoc univariate means (main effects and interactions) were graphed in order to visually assess group mean differences. Post-hoc comparisons of these main effects and/or interactions were then calculated using the Tukey B test.

Results

The 2 x 4 x 4 design resulted in thirty-two cells. Ideally, all eight vignettes were to be read by male and female participants of all four virginiv status groups. For this to have occurred, all four virginiv status groups would have to naturally occur with equal frequency in the population. However, the incidence of the four groups was unevenly distributed. Multivariate data analysis

accommodating unequal groups took this into account.

Analyses conducted involved general hypotheses that statistically significant attributional differences would occur as a function of the independent variables. No specific directional hypotheses were established. Several questions were of specific interest: (1) What is the relationship between self-monitoring and participants' self-selected virginity status? (2) Are certain virginity subgroups high in self-monitoring and other virginity subgroups low in self-monitoring? (3) What causal attributions do the four virginity subgroups make about members of their own virginity subgroup and other virginity subgroups? (4) Are there any sex differences regarding the above variables?

Self-monitoring and Self-selected Virginity Status

To determine whether or not there was a significant correlational relationship between self-monitoring and self-selected virginity status, Pearson and Spearman correlation coefficients were calculated. The results yielded a Pearson $r = -.0047$ ($p < .47$) and a Spearman $r = .0627$ ($p < .19$). Neither correlation was statistically significant, thus self-monitoring scores were not significantly related to subjects' self-selected virginity status. An ANOVA between virginity status groups also failed to find differences in self-monitoring ($F = .432$, $df = 3, 197$, $p < .73$). A MANCOVA with self-monitoring as a covariate was initially used. Self-monitoring, however, was not statistically significant as a covariate in this analysis ($Beta = .032$, $F = .167$, $p < .06$). Therefore, remaining analyses were conducted without the self-monitoring covariate, using MANOVA procedures.

Causal Attributions

A four-way MANOVA was conducted between (1) participants' sex, (2) participants' virginity status, (3) sex of person in vignette read, and (4) virginity status of person in vignette read (or interactions of these), for the three subscales of the CDS. Using the Wilke's Lambda criterion, six statistically significant effects were found: four two-way effects and two three-way effects. The one significant four-way effect was uninterpretable because of empty cells.

Table 2 about here

Results indicated a statistically significant interaction between the sex and virginity status of the participant and the virginity status of the person in the vignette ($\Lambda = .685$, $F = 2.31$, $df = 27, 447$, $p < .005$). There was a statistically significant triple interaction between the virginity

status of the participant and the sex and virginity status of the person in the vignette ($\Lambda = .715$, $F = 2.0$, $df = 27,447$, $p < .002$). There was a statistically significant interaction between the sex of the participant and the virginity status of the person in the vignette ($\Lambda = .367$, $F = 2.48$, $df = 9,372$, $p < .009$). The virginity status of the participant and the virginity status of the person in the vignette interacted significantly ($\Lambda = .776$, $F = 1.68$, $df = 24,444$, $p < .02$). There was a statistically significant interaction between the sex and the virginity status of the person in the vignette ($\Lambda = .857$, $F = 2.69$, $df = 9,372$, $p < .005$). Finally, participants' sex and virginity status interacted significantly ($\Lambda = .864$, $F = 2.55$, $df = 9,372$, $p < .007$).

MANOVA results indicated that some groups differed on at least one of the three dependent measures. Post-hoc univariate ANOVAs were conducted on each CDS dependent variable for each statistically significant MANOVA effect.

The three-way interaction of participants' virginity status and sex and the virginity status of the person in the vignette was statistically significant for the controllability variable ($F = 2.84$, $df = 9,155$, $p < .004$) and the stability variable ($F = 2.05$, $df = 9,155$, $p < .03$). The interaction of the participants' virginity status and the sex and virginity status of the person in the vignette read was significant for the controllability variable ($F = 2.51$, $df = 9,155$, $p < .02$).

Table 3 about here

The two-way interaction of participants' sex and virginity status was statistically significant for the internality variable ($F = 3.79$, $df = 3,155$, $p < .01$) and the stability variable ($F = 2.66$, $df = 3,155$, $p < .05$). The interaction of the virginity status and sex of the person in the vignette was statistically significant for the controllability variable ($F = 5.27$, $df = 3,155$, $p < .002$). The interaction of the participants' virginity status and the sex of the person in the vignette was statistically significant for the internality variable ($F = 3.88$, $df = 3,155$, $p < .01$). The interaction of the participants' virginity status and the virginity status of the person in the vignette was statistically significant for the stability variable ($F = 2.62$, $df = 8,155$, $p < .01$). Finally, the interaction of the participants' sex and the virginity status of the person in the vignette was statistically significant for the controllability variable ($F = 4.16$, $df = 3,155$, $p < .007$).

Post-Hoc Analyses

Post-hoc multiple comparisons of statistically significant univariate effects were conducted using a modified Tukey procedure (Kirk, 1982). This procedure provides control of the Type I

error rate and is recommended for post-hoc comparisons among large numbers of means with unequal cell sizes. For these data, the Tukey tests were conducted at $\alpha = .05$ for each significant overall effect (i.e., the sum of the per comparison error rates will not exceed $\alpha = .05$ for a given main effect or interaction). Statistically significant contrasts (and their means) were found in the following categories:

Sex of participant by participant's virginity status interaction. (1) Although univariate analyses revealed statistically significant effects for attributions of internality and stability, the conservative Tukey procedure revealed no statistically significant differences.

Virginity status of vignette by sex of vignette interaction. (2) Participants attributed significantly more controllability to vignettes of female regretful non-virgins than to vignettes of female adamant virgins ($12.1818 > 7.70$, $p < .05$).

Participants' virginity status by sex of vignette interaction. (3) Non-virgin subjects attributed significantly more internality to vignettes of females than potential non-virgin participants did to vignettes of males ($14.32 > 9.875$, $p < .05$). (4) Adamant virgin participants attributed significantly more internality to vignettes of males than potential non-virgin participants did to vignettes of males ($13.42 > 9.875$, $p < .05$).

Sex of participant by virginity status of vignette interaction. (5) Male participants attributed significantly more controllability to vignettes of potential non-virgins than to vignettes of adamant virgins ($11.9375 > 6.8571$, $p < .05$). (6) Male participants attributed significantly more controllability to vignettes of potential non-virgins than female participants did to vignettes of non-virgins ($11.9375 > 7.20$, $p < .05$).

Participants' virginity status by virginity status of vignette interaction. (7) Regretful non-virgin participants attributed significantly more stability to vignettes of regretful non-virgins than to vignettes of adamant virgins ($19.5556 > 14.3077$, $p < .05$). (8) Adamant virgin participants attributed significantly more stability to vignettes of non-virgins than regretful non-virgin participants did to adamant virgins ($20.375 > 14.3077$, $p < .05$).

Participants' virginity status by sex of subject by virginity status of vignette interaction. (9) Female adamant virgin participants attributed significantly more stability to vignettes of non-virgins than female regretful non-virgin participants did to vignettes of adamant virgins ($20.8333 > 13.7143$, $p < .05$). (10) Female adamant virgin participants attributed significantly more stability to vignettes of non-virgins ($20.833 > 14.5455$, $p < .05$).

Participants' virginity status by sex of vignette by virginity status of vignette interaction

(11) Regretful non-virgin participants attributed significantly more controllability to vignettes of male potential non-virgins than they did to vignettes of female adamant virgins ($17.25 > 6.333$, $p < .05$). (12) Regretful non-virgin participants attributed significantly more controllability to vignettes of male potential non-virgins than non-virgin participants attributed to female potential non-virgins ($17.25 > 7.30$, $p < .05$). (13) Regretful non-virgin participants attributed significantly more controllability to vignettes of male potential non-virgins than non-virgin participants attributed to vignettes of male non-virgins ($17.25 > 7.833$, $p < .05$). (14) Regretful non-virgin participants attributed significantly more controllability to vignettes of male potential non-virgins than non-virgin participants did to vignettes of male adamant virgins ($17.25 > 3.1905$, $p < .05$). (15) Non-virgin participants attributed significantly more stability to vignettes of female potential non-virgins than they did to vignettes of female regretful non-virgins ($19.5333 > 15.25$, $p < .05$).

Discussion

Results suggest that participants attributed significantly more controllability to vignettes of female regretful non-virgins than to vignettes of female adamant virgins. Thus, participants were making the attribution that female regretful non-virgins have more control over their sexual decisions than do female adamant virgins. Perhaps this may be expected since part of the operational definition of the regretful non-virgin is the "decision" to no longer engage in premarital sex, and thus take some "control" over their sexual behavior. The lack of such a distinction between male targets is congruent with research done by Schechterman (1984) which suggests that attitudes about female sexual behavior are much more likely to be judged against a "norm" than the behavior of males. Jessor and Jessor (1975) also suggest a double standard which exists for male and female sexual behavior.

Participants also implied that the female adamant virgin has less control over her sexual decisions. A moral attribution may be made about the female adamant virgin: her "religious" beliefs preclude premarital sex (and thus she has little personal control over her sexual behavior). This is congruent with the research done by Jessor and Jessor (1975) and Jessor et al. (1983) which suggests that adamant virgin females, more often than males, are perceived to be more religious. This might account for their self-selected adamant virgin status. While this is sometimes true of male adamant virgins, attributions about such males often have to do with the male's inability to find a willing sex partner, implying that the male adamant virgin is socially undesirable.

In terms of participants' sex differences, male subjects attributed significantly more controllability to vignettes of potential non-virgins than to vignettes of adamant virgins. Perhaps potential non-virgin males are perceived to have more control over their sexual decisions simply because they have chosen to be open to premarital sex (given the right person and situation). Taking advantage of such "opportunity" is congruent with the way in which most American males are socialized (McCreary-Juhasz & Maskay, 1983; McCreary-Juhasz & Sonnenshein-Schneider, 1980; Reiss, 1980). In contrast, these same males might be saying that adamant virgins are stuck, having no control over their sexual behavior *per se*, perhaps based on the same attributions of morality suggested earlier. The attributional styles of these male participants are congruent with Crain's (1980) research which found that male subjects made different attributions about the sexual behavior of male and female targets who were more similar to Schechterman's (1984) "adamant virgins" than "potential non-virgins." Male targets have typically been seen as "biologically" motivated in their sexual behavior, whereas female targets are typically seen as being "emotionally" motivated (Crain, 1980). Such stereotyped attributions may have been made by both male and female participants in the current study.

A variety of results were specifically related to the participants' own self-selected virginity status. Adamant virgins felt that sexual decisions made by males came from within those males (internal to them). In contrast, potential non-virgins seemed to be saying that the sexual decisions made by males were dictated much more from the external world. An interaction between the participant's self-selected virginity status and the sex of the target exists. Knowledge of one's own sexual decisions appears to impact upon the way in which one views others. In this case, adamant virgins may be saying that males can essentially do whatever they want. Potential non-virgins may see males in a more "gray" light. Some males have internal control over their sexual decisions; other males must deal with external, perhaps social control.

A unique difference between adamant virgins and potential non-virgins was also found. This constitutes a willingness to place oneself into a virginity status which falls in a rather "gray" area (potential non-virgin) versus placing oneself into a virginity status that is clearly black or white (adamant virgin). These results support and may be explained by Bem's (1965; 1967; 1972) self-perception theory and research which suggests that individuals look to their own actions to judge inferences about themselves and others. The chance that the two virginity status groups are imposing beliefs about themselves on others (specifically, vignettes of males) remains a possibility and speaks to actor-observer, similarity effects.

Non-virgin participants attributed significantly more stability to vignettes of female potential non-virgins than they did to vignettes of female regretful non-virgins. Non-virgins may be saying that "whatever it is that has made her a potential non-virgin (e.g., attitudes and behaviors) will stay with her over time." Interestingly, non-virgin participants may be saying (of the regretful non-virgin) that "those causes that have made her a regretful non-virgin are pretty fickle. Whatever it is that has caused her to be a regretful non-virgin will probably change after a while." This might be relevant to what Shaver (1975) states about attributions of responsibility. If the causes of the regretful non-virgin status are seen as "failure" in sexual decision-making, then a causal attribution of internality and instability may be made. An actor's negative consequences yield internal attributions by the observer. Non-virgins may see themselves as a "subgroup" of the female regretful non-virgin and be thinking "I know what it is like to be a non-virgin, and I think I know what it would be like to be a regretful non-virgin. If things ever happen to make me a regretful non-virgin, chances are it won't last forever. I'll go back to being a non-virgin soon after."

Perhaps one of the most fascinating results of this study is that regretful non-virgin participants attributed significantly more stability to vignettes of regretful non-virgins than to vignettes of adamant virgins. This suggests some possible explanations which could not be assessed in similar past research. In contrast to what non-virgins are saying about regretful non-virgins, when given the chance to represent themselves, regretful non-virgins may be saying that the causes (perhaps experiences?) that made them a regretful non-virgin are stable and will remain that way. They may be looking at the adamant virgin thinking "the causes which make them an adamant virgin change all the time. Soon they will be a potential non-virgin, then a non-virgin, then a regretful non-virgin." Perhaps regretful non-virgins know something about the world that they feel adamant virgins do not know. This result raises the possibility that regretful non-virgins are ex-adamant virgins. This is in contrast to prior research results (Schechterman, 1984) which indicated that regretful non-virgins have as many sexual partners as non-virgins which, in turn, suggested that regretful non-virgins might be more similar to non-virgins than to adamant virgins.

Finally, results indicate that regretful non-virgin participants attributed significantly more controllability to vignettes of male potential non-virgins than they did to vignettes of female adamant virgins. The same effect was true compared to non-virgin subjects reading vignettes of female potential non-virgins, male non-virgins, and male adamant virgins. Essentially, a very

strong effect seems to be taking place here. Regretful non-virgins are saying that male potential non-virgins have control over their sexual decisions and behavior. Perhaps they are saying "If male potential non-virgins want to change their virginity status, they have control over this and easily can."

This is in contrast to the attributions made by several other virginity status groups about several other male and female virginity status groups. The regretful non-virgin may be thinking two separate yet related things: (1) They may think that they had control over their sexual decisions at one time; and/or (2) they may think that they have control over their sexual decisions at present. This process may be a part of the regretful non-virgin's attributions about the male potential non-virgin, suggesting that he has the ability to take control of life and his virginity status. There is no specific previous research which addresses this result.

Limitations of the Study

Strengths as well as limitations are represented by the theory, design, and analyses of this study. Some limitations were controlled for by appropriate experimental design while control for others was more difficult. The research is conceptually based on the existence of four virginity status groups. It is clear that less is known about the potential non-virgin and the regretful non-virgin groups. Thus, conclusions regarding these groups are more tentative. Having participants self-select themselves into virginity status groups may be viewed as either a strength or a limitation. Some individuals may attach social stigma to membership in a particular group. The result, although controlled for by design and analysis, is that certain cells may be over-represented while other cells may be under-represented. This research was based on prior constructs and designs which included established methodologies. Many of the results obtained coincide with research findings conducted by researchers with similar interests and incorporates theory, design, and methods refined as a result of such research. Extensive data analyses were conducted in order to assure valid conclusions, including analyses which served as statistical checks of prior analyses.

Summary and Conclusions

The purpose of this research was to determine whether or not different virginity status groups make different causal attributions about virginity and sexual choices, to determine whether or not self-monitoring influences this attribution process, and to determine whether or not there were any group sex differences. Previous literature suggests that causal attributions affect the reactions of individuals to events. Such attributions have been shown to mediate reactions and

attitudes toward other people as well as toward one's own future reactions, attitudes, and behaviors. The present research was an attempt to determine if and how the virginity status of the observer interacts with the virginity status of the target to produce various attributions about others who possess the same or a different virginity status.

Self-monitoring was found to be unrelated to virginity status. Both virgin and non-virgin participants were similarly distributed along a self-monitoring score continuum. It has been suggested that high self-monitors think of others in terms of stable traits and dispositions, which then makes it easier to predict and influence others (Snyder, 1983). The present research did not support self-monitoring influences on virginity status, nor the attributional process. This finding is congruent with Furrham's (1981) research which found that the high self-monitor's dispositional bias was not always evident.

Several conclusions may be suggested: (1) All four virginity status groups appear to exist in the population, and both male and female participants are represented. (2) Males as well as females, score both high and low in self-monitoring. It appears that self-monitoring is not a reliable discriminator of virginity status; further assessment and research is indicated. (3) Attributional conclusions do differ across virginity status and sex of both observer and target. Information about sexual history, suggested by Frank and Maass (1985), does make a difference. Sex of the observer, sex of the actor, virginity status of the observer, and virginity status of the actor all appear to have some effect on attributions. (4) Different causal attributions (for locus of control, stability, and controllability dimensions) are made about similar and dissimilar actors by both male and female observers (adamant virgin, potential non-virgin, non-virgin, and regretful non-virgin observers). (5) Attributions made about actors, who are of the same sex and virginity status of the observer, may reveal qualitatively different information about the observer than attributions made about actors of different sex and virginity status.

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Table 1
Summary of Demographic Variables*

<u>Age</u>	<u>f</u>	<u>%</u>
18	22	11.1
19	32	16.2
20	51	25.8
21	50	25.3
22	24	12.1
23	9	4.5
24	5	2.5
25-38	5	2.5
<u>Totals</u>	<u>198</u>	<u>100.0</u>

<u>Sex</u>	<u>f</u>	<u>%</u>
males	81	40.9
females	117	59.1
<u>Totals</u>	<u>198</u>	<u>100.0</u>

<u>Relationship Status</u>	<u>f</u>	<u>%</u>
single	162	81.8
living together	2	1.0
engaged	20	10.1
married	12	6.1
divorced	2	1.0
<u>Totals</u>	<u>198</u>	<u>100.0</u>

<u>Religion</u>	<u>f</u>	<u>%</u>
Catholic	68	34.3
Protestant	75	37.9
Jewish	0	0.0
Other	40	20.2
No affiliation	15	7.6
<u>Totals</u>	<u>198</u>	<u>100.0</u>

*Numbers rounded to nearest tenth

<u>Class Standing</u>	<u>f</u>	<u>%</u>
freshmen	51	25.8
sophomore	55	27.7
junior	41	20.7
senior	51	25.8
<u>Totals</u>	<u>198</u>	<u>100.0</u>

<u>1st Sex Ed Class</u>	<u>f</u>	<u>%</u>
elementary	21	10.6
junior high	53	26.8
senior high	48	24.2
college	50	25.3
never	26	13.1
<u>Totals</u>	<u>198</u>	<u>100.0</u>

(Table 1 continues)

(Table 1 continued)

Summary of Demographic Variables

Virginity Status	AV		PNV		NV		RNV	
	f	%	f	%	f	%	f	%
males	4	2.0	4	2.0	57	29.0	16	8.0
females	12	6.0	13	6.5	68	35.0	24	13.0
Totals	16	8.0	17	8.5	125	64.0	40	21.0

Virginity Status

(Year in School)	AV		PNV		NV		RNV	
	f	%	f	%	f	%	f	%
freshman	6	3.0	6	3.0	26	13.0	13	6.5
sophomore	3	1.5	5	2.5	2	<1.0	4	2.0
junior	6	3.0	2	<1.0	27	13.6	6	3.0
senior	1	<1.0	4	2.0	36	18.0	10	5.0
Totals	16	8.0	17	8.5	91	45.6	33	16.5

AV = Admant Virgin

PNV = Potential Non-virgin

NV = Non-virgin

RNV = Regretful Non-virgin

Summary of Demographic Variables

Ethnic Background	f	%	Ethnic Background	f	%
Caucasian	160	80.8	Hispanic	4	2.0
Black	26	13.1	Oriental	2	1.0
Native Am.	6	3.0	Totals	198	100.0

(Table 1 continues)

(Table 1 continued)

Self-monitoring Scores by Virginity Status

Variable	f	%	m	sd
AV	16	8.1	11.938	2.670
PNV	17	8.6	12.941	3.325
NV	125	63.1	12.976	3.855
RNV	40	20.2	12.125	3.575
Totals	198	100.0	12.717	3.673

Table 2

MANOVA Results

Effect	df	Wilke's Lambda	F	p
Main Effects:				
sex	3,153	.997	.1285	.943
vs	9,372	.916	1.51	.142
sexvign	3,153	.982	.910	.438
vsvign	9,372	.901	1.80936	.065
Two-way Effects:				
sex x vs	9,372	.864	2.5580	.007**
vsvign x sexvign	9,372	.857	2.69731	.005**
vs x sexvign	9,372	.906	1.6943	.089
sex x sexvign	3,153	.982	.8906	.448
vs x vsvign	24,444	.776	1.68722	.023*
sex x vsvign	9,372	.867	2.48448	.009**
Three-way Effects:				
vs x sex x vsvign	27,447	.683	2.3089	.000**
vs x sexvign x vsvign	27,447	.715	2.01690	.002**
sex x vsvign x sexvign	9,372	.934	1.16576	.316

sex = participants' sex

sexvign = sex of character in vignette

vs = participants' virginity status

vsvign = virginity status of character in vignette

*p < .05 **p < .005

Table 3

Univariate Results for Significant MANOVA Effects for Each CDS Variable

Effect	df	INT		CONT		STAB	
		F	p	F	p	F	p
sex x vs	3,155	3.79	.01*	1.45	.23	2.66	.05*
vsvign x sexvign	3,155	1.39	.24	5.27	.00**	2.50	.06
vs x sexvign	3,155	3.88	.01*	1.07	.36	.119	.94
vs x vsvign	8,155	1.69	.10	.704	.68	2.62	.01*
sex x vsvign	3,155	1.40	.24	4.16	.00**	1.00	.39
vs x sex x vsvign	9,155	1.62	.11	2.84	.00**	2.05	.03*
vs x sexvign x vsvign	9,155	976	.46	2.51	.01*	2.15	.02*

sex = participants' sex

vs = participants' virginity status

sexvign = sex of character in vignette

vsvign = virginity status of character in vignette

*p < .05

**p < .005